

**Peace and Security on the Korean Peninsula:
Reflections on the Economic Dimension**

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INTRODUCTION

Our Study Mission ¹ focused on the potential for instability and hence military or other confrontations between North and South Korea that emanate from conditions within North Korea. It is of course possible that similar problems might emanate from South Korea. However, most of the focus of this discussion is on the North Korean economy, with some comparison to that to South Korea.

We identified three major potential causes of instability. One is the potential threat of North Korea producing and hence possessing nuclear weapons. I, like others, consider this a highly destabilizing factor; it is discussed elsewhere in the

¹ This report is a result of participating in the Asia Society Study Mission on Peace and Security in the Korean Peninsula, which had briefings in the United States in April and met with senior officials and specialists in the capitals of The People's Republic of China, the Democratic People's Republic of Korea (DPRK), the Republic of Korea (South Korea), Japan, and the Soviet Union between May 8-29, 1991. This paper is impressionistic rather than scholarly, based on a partial reading of materials available in English and meetings, conversations, and observations during our trip. The study mission focused mainly on political and security issues, with considerably less discussion of economic or economic policy issues; nonetheless they figured significantly in our considerations. Most of this paper focuses on North Korea, since much less is known about it. In North Korea, in addition to our meetings with the First Vice Minister of Foreign Affairs and senior members of the Institute of Disarmament and Peace, we met with the Vice President of the Agricultural College in Wonson, the President and Senior Faculty of Kim Il Sung University, and the Vice Minister of External Economic Affairs. I have benefitted from comments and ~~corrections of factual errors by Professor Pong S. Lee,~~ Department of Economics, State University of New York at Albany, and Professor Robert Scalapino, leader of the Study Mission. What follows reflects my subjective judgments and evaluation, for which no one else can be blamed.

Study Mission report. A second factor is the transition of political leadership following the death of President Kim Il Sung. While his son, Kim Jung Il, apparently is his designated successor, there is some uncertainty as to the nature of the transition process. Typically in Communist nations the legitimacy of leadership change has been open to question and tension and conflicts in the transition period have been the norm. This second issue is also dealt with elsewhere in the Study Mission report. The third potential cause of instability lies in the possibility of economic decline, even collapse, of the North Korean economy sufficient to engender chaos which would have severe political and security repercussions.

Discussions of peace and stability of the Korean peninsula tend to move very quickly to the issue of the reunification of the two parts of the Korean peninsula, which is after all populated by one people sharing a common language and long cultural heritage, into a single nation-state. Both North Korea and South Korea advocate this as the ultimate policy objective. Both assert that full reunification will take a long time to achieve, and indeed may be left to a future generation. Nonetheless, the reunification issue figures importantly in any discussion of economic conditions in North Korea and in South Korea, and in their economic relationship.

THREE BASIC POINTS

Any evaluation of the economies of the Korean peninsula must start with three fundamental facts: the two economies have very

different economic systems; the relative economic performance over time of the two economies has been very different, which has profound implications; and the differences in amount and availability of economic and other basic data are staggering. A great deal is known about the South Korean economy and its performance ²; and very little accurate information is available about the North Korean economy and its performance.

Two Very Different Economic Systems

An obvious fact, which nonetheless needs always to be remembered and stressed, is that these two economies embody two very different economic and political systems that are in fundamental contradiction.

South Korea has essentially a private enterprise, market economy, with private ownership of the means of production and great reliance on the price mechanism for the allocation of resources and the determination of what gets produced and sold. Importantly, it has pursued an export-oriented development strategy which has offset import-substituting industrial and agricultural policy biases, and has resulted in a deep integration of South Korea into the world economy. At the same

² The South Korean government publishes copious amounts of standard economic data and there are a number of studies of South Korea's economic success as a newly industrialized economy (NIE). For a recent overview, see Byung-Nak Song, The Rise of the Korean Economy (Oxford University Press, 1990). Contemporary data and materials are available through the Korea Economic Institute of America; see, for example, its Korea's Economy 1991, Vol. 7, #1 (Spring 1991).

time, the economy has been subject to strong government policy leadership, interventionist in nature. The central government has played a major role in targeting priority industries by pursuing an active industrial policy, particularly in heavy and chemical industries, and has utilized the captive financial system to achieve its objectives. Rapid economic development since the mid-1960s took place under an authoritarian regime until 1987, when the polity moved to a democratic system of party politics and free elections. The assertive leadership and heavy hand of the government has been greater in the South Korean economy than in any other successful newly industrialized economy, or in Japan.

In contrast, North Korea has a centrally planned, command economy in which resources are allocated by bureaucratic decision based on annual and seven-year plans. The basic model of central planning is that of the Soviet economy of the 1950s. So too is the development strategy. North Korea has adopted essentially a Stalinist model of economic development: first priority to heavy industry (steel, machinery, transport, equipment, and especially military hardware), then on consumer goods industries, and virtually no reliance on exports except to the extent they are required to pay for essential imports. Prices and markets have played virtually no role in this system. Trade, based on barter and currency-clearing type arrangements where possible, has been directed toward the friendly socialist nations, predominantly the Soviet Union, which historically supplied 50-60% of North Korean

imports and bought a comparable share of its exports.

Onto this strategy has been grafted the Kim Il Sung ideology of chuch'e (self-reliance) socialism, which in its economic dimension places an even greater emphasis on the domestic economy. As a self-reliant economy, the strategy has been to develop a diversified industrial structure in order to produce virtually all manufactured goods as well as foodstuffs and to minimize the role of trade. The concepts of economic specialization based on comparative advantage and interdependence with the world economy are far removed from chuch'e philosophy as it has been espoused to date.

These profound differences in the respective economic systems have important implications.

First, it is impossible to have full, complete economic integration, as we think normally occurs within the boundaries of a single nation, when two economic systems are so different: central planning versus market economy. Thus, the eventual complete reunification into one nation, the stated long-term goal, implies that there will have to be in principle only one economic system -- either planning or market -- as its core feature, though in practice some degree of mixed economy is possible and indeed likely.

Nonetheless, it is quite possible for the North and South to engage in considerable economic interaction without full economic integration. The current situation of China and Taiwan suggests the possibilities of economic interaction between two systems.

In practice there has been virtually no trade between North and South Korea, essentially a decision made by the North Korean government. Thus far, the trade that has taken place has been done indirectly through Hong Kong, Japan and Singapore, notationally at least. South Korea released data on July 15, 1991 that South Korea's indirect imports from North Korea jumped tenfold in the first six months of 1991 to \$73.6 million, mainly zinc, steel, and fishery products; while North Korea imported \$12.5 million indirectly from South Korea, mainly petrochemicals, textiles, and consumer products (Far Eastern Economic Review, July 25, 1991, p. 63) More important symbolically, a direct trade barter deal -- 5,000 tons of South Korean rice for North Korean cement and coal -- was negotiated in early 1991 and, following some hitches on both sides, as of summer 1991 evidently will be carried out. Thus, it is quite possible that trade could be substantially developed and expanded in due course, not only through indirect channels but directly. Similarly, while there are no joint ventures or joint cooperation projects at present, these are future possibilities. ³

The relative importance of economic policy and security policy affects the respective approaches to economic relations between North and South. The North Korean government holds to

³ For an interesting discussion of a step-by-step process of increasing economic integration, see Ha-Cheong Yeon, "Bridging the Chasm: Cooperative Economic Relation Between South and North Korea", Korea Development Institute Working Paper Number 9012, August 1990.

the position that politics dominates economics, and that there should be a resolution of political and security issues in some grand design, at least in preliminary form (such as confederation), prior to the development of economic relationships. Policy makers in South Korea take the position that economic and cultural and personal exchange relationships should develop prior to any grand political solution, on a step-by-step approach, both on their own merits and as confidence-building measures leading to more comprehensive political solutions.

There has been a debate under way in North Korea for several years about some alterations in its development strategy. The third Seven Year Plan, begun in 1987, places a greater emphasis on the production of consumption goods relative to capital goods. Policymakers want to engage in more foreign trade and to encourage some joint ventures, but apparently the degree of opening being considered is quite limited. It does not yet appear to reflect any significant change in the basic economic development philosophy. In general, the economic policymaking situation in North Korea seems to be somewhat fluid domestically; my impression is that policymakers are somewhat ill-informed about doing business with foreigners and rather nervous about the possibilities of foreign exploitation. The environment strikes me as roughly comparable to that in China in the early 1970s.

Relative economic performance

The respective economic performances of North Korea and

South Korea have been very different. The Korean War (1950-1953) was very destructive in both North and South. The period since the cessation of fighting should be divided into at least two phases. In the first phase until the early 1970s, the North Korean economy grew very rapidly, substantially more so than the South Korean economy. Presumably this was due to the initial success in mobilization of resources and increasing saving and investment rates in a centrally planned economy, one of the great strengths of a command economic system. Moreover, North Korea received an estimated \$1.4 billion in economic aid between 1954 and 1960 from the Soviet Union and other communist allies. Much of the machinery in North Korean factories is Soviet of 1950s-1960s vintages. In contrast, the South Korean economy did not do very well in its inward-looking, import-substituting development policy, based substantially on US economic aid, in the 1950s and early 1960s. It was not until the export-oriented development strategy and related economic reforms were undertaken from the mid-1960s that the South Korean economy began to grow very rapidly. South Korea received economic aid from the United States, and the normalization of relations with Japan in 1965 and the subsequent inflow of Japanese capital, technology, and aid were additional contributory factors.

In the last 10-15 years the growth rates of the two economies have reversed. During the decade of the 1980s the North Korean economy apparently grew very slowly, perhaps a 3% or

so annual average ⁴. I have not seen any comprehensive analysis and explanation of this slowdown. Presumably it reflected the using up of the growth potential of centralized planning and allocation of resources, increasing inefficiencies in the use of those resources, and an increasingly ageing capital stock. Moreover, access to foreign technology was limited, primarily to that of the Soviet Union and Eastern Europe. More recently, economic growth has slowed even further and reportedly was negative in 1990, due to a combination of two poor harvests and traumatic changes in the economic relationship with the Soviet Union. North Korea can no longer purchase oil and other essentials from the Soviet Union at subsidized prices (oil was apparently purchased at 2/3 world prices), and must settle its debit balances (and perhaps even individual transactions) in hard currency. While North Korean sources, as discussed below, implied these new, more severe conditions have already been applied, Russian sources indicated they are being put into effect

⁴ I have benefitted in my learning about the North Korean economy from: Eui-Gak Hwang, "Economic Comparison of North and South Korea", chapter 3 of a book manuscript at the Brookings Institution; Teruo Komaki, "Current Status and Prospects of the North Korean Economy", in Masao Okonogi, ed., North Korea at the Crossroads, (Tokyo: Japan Institute of International Affairs, 1988); Pong S. Lee, "Economic Development Strategy and Prospects for Reform in North Korea," in Ilpyong J. Kim, ed., Korean Challenges and American Policy (New York: Paragon House, 1991); John Merrill, "North Korea's Halting Efforts at Economic Reform", in Robert Scalapino and Chong-Sik Lee, eds., North Korea in Transition (forthcoming); Kwan-Chi Oh, "The Dilemma of the North Korean Economy in the Changing World", Korean Journal of International Studies XXII, #1 (Spring 1991); Sang-Woo Rhee, "North Korea in 1990: Lonesome Struggle to Keep Chuch'e", Asian Survey XXXI, #1 (January 1991).

somewhat more gradually. Regardless, North Korean policy makers can no longer rely on the Soviet Union as a significant source of economic aid.

In contrast, the South Korean economy has successfully achieved very rapid economic growth for twenty-five years. The growth rate has averaged on the order of 7-8% and at times (and in recent years) higher.

These cumulative growth records have resulted in quite different levels of economic development and standards of living in the two economies. It is estimated that the 1990 GNP (Gross National Product) of South Korea is somewhere between four and ten times that of North Korea. This wide gap in the estimates (discussed below) is disturbing, but the basic fact remains: the South Korean economy in total GNP, in per capita output, in living standards, in the amount and especially the quality of its capital stock, and in level of technology, far surpasses that of North Korea. The population of South Korea is about double that of North Korea (42.2 million versus 21.4 million). This means that the GNP/per capita of South Korea is between 2 and 5 times higher than that of North Korea. Given the higher share of GNP allocated to defense expenditures in North Korea than in South Korea, the gap in living standards is probably wider. That is reinforced by increasing South Korean access to foreign consumer as well as capital goods, whereas North Korean reliance on imported consumer goods is negligible.

The future prospects of the economies should be viewed in

both the short run and the long run. In the short run each economy has its own difficulties, but they are opposite: South Korea is probably growing too fast, and North Korea had a recent absolute decline in GNP and may not have any increase in 1991. The South Korean problem is that over the past five years the economy has apparently grown faster than its long-run potential growth rate, is straining its resources to the limit, and this has been reflected in renewed inflationary pressures (inflation rates in excess of 10%) and in labor shortages. There also may have been some misallocation of investment activities in 1990 to urban housing construction, ostensibly for lower-income but in reality more for upper-middle-class families, which generated excessive increases in construction costs and transferred resources away from manufacturing activities. This has shown up as a deficit in the current account of the balance of payments in 1990 and 1991, which has been projected by some to persist, though at very modest levels, for another year or two. Some of South Korea's economic problems, particularly the dramatic increases in wage rates in recent years, are by-products of the democratization process since the end of 1987. While some South Korean economists pointedly note the economy has not been particularly well managed under the Roh government, overall macroeconomic performance has been reasonably good.

It is difficult to ascertain the actual condition of the North Korean economy. The impressionistic information one gets from visual observation, conversations, and whatever statistical

data are available does not provide much direct evidence. Apparently there were poor harvests in 1989 and 1990 and this has caused problems. Whether they have been due to weather factors, or reflect more fundamental problems of land erosion as upland has been turned to crop use without adequate erosion protection, is not clear. It has been argued that North Korea has severe energy shortages of more than a temporary nature. Our evidence on this was on the whole supportive of this view. We were told by Japanese sources that the energy loss from underground transmission of electricity is extraordinarily high. Over time the transmission cables, probably placed underground for security reasons, have deteriorated and have not been replaced. We were told the energy loss was 84% -- only 16% of electricity generated gets to its final use, an incredible wastage rate. We observed only a very small number of vehicles on the city streets and highways, and were told that the buses were running less frequently than before in explaining why we saw large numbers of people walking. On the highway to the east coast port of Wonson, three hours from Pyongyang by car, we saw few vehicles, mostly trucks and the occasional truck. A substantial proportion -- perhaps 10% -- were broken down and were being repaired -- not just tires but axles and engines.

In terms of longer run prospects, it is highly likely the South Korean economy will continue to grow rapidly over the coming decade and longer. The domestic savings rate is now high, entrepreneurship and willingness to invest by businesses large

and small are great, the people are ambitious and desirous of further improvement in their material standard of living, the educational level is rising steadily and there is strong recognition of the importance of higher education for economic success and social mobility among the populace, and the technology level is rising rapidly. At the same time the economy will have to work out a new set of management-labor relations and this is likely to be a strife-ridden process. Moreover, as incomes and wages have risen substantially in Korea, labor-intensive production is no longer competitive yet medium-high technology industries have yet to become competitive. So as South Korea continues to climb up the development ladder of increasing technology sophistication, greater labor skills, and more capital per worker, it finds itself being squeezed from both above and below. And the role of the giant family-owned business conglomerates (chaebol) will need to be redefined in terms not only of economic efficiency but distributional equity and economic and political power. Nonetheless, it is likely the economy will overcome these problems. It would be dangerous to bet against the successful performance of the South Korean economy in the foreseeable future.

The longer-run developmental prospects of North Korea appear to be much less good. Presumably the central planners will continue to be able to mobilize resources and maintain a high saving and investment rate, but like other centrally planned economies the utilization of that investment activity is less and

less efficient. Part has to do with serious lack of access to modern technology from the West (and from South Korea). The underlying causes of slow growth are structural in nature. A relatively autarkic development strategy has been carried to its limits. North Korea needs to increase foreign trade considerably, and would benefit from foreign direct investment through joint ventures, if the economy is to grow much at all. A key question is whether the economy can resume moderate growth -- say 4-5% -- with only modest opening. Or will it require a quite substantial, indeed wrenching, opening of foreign trade and foreign investment, analogous to the Chinese model, in order to bring in sufficient amounts of technology, capital, essential imports of machinery and oil and other needed goods, and to generate the exports to pay for much of those imports? This is probably the most important policy issue facing North Korea economic development planners and policy makers.

The Paucity of Data on the North Korean Economy

The North Korean government is extremely secretive on all matters, including virtually all economic data. Very little data are published, and those are of a quite general nature. The annual state budget, which usually contains more economic information than any other official source in North Korea, is typically announced by the Ministry of Finance at the Supreme People's Assembly meeting in early April. Kim Il Sung, in his annual New Year's speech, sometimes reveals selected information on economic performance. Foreign trade data are derived from

North Korea's foreign trade partners. Most data published by North Korea, including data for most physical output measures, are in terms of rates of growth over some base year. With neither price nor quantity data available in any detail it is very difficult to make even crude estimates of the level of economic output and its growth over time.

Accordingly, the estimates of North Korea GNP vary widely. Hwang (op. cit) provides a nice discussion of the various estimates and the measurement issues involved. The GNP estimates have to be derived from the socialist concepts of output, namely, the gross value of social product (GVSP). GVSP involves a double-counting of output since it adds up total output at each stage of industrial activity rather than incorporating only the value added. Moreover, it excludes a range of services which are formally identified as unproductive (such as, for instance, tourism). Adjustments have to be made to these measures to be consistent with the GNP measure standard for international comparison with market economics.

The estimates of GVSP and of GNP derived from them are in North Korean currency. A crucial factor in making comparisons is to determine what exchange rate to use. There are at least three exchange rates: the official rate; the commercial rate; and the tourist rate (which has been and still may be linked to the commercial rate at slightly less favorable terms). All rates have varied somewhat against the dollar; recently the official rate was 0.97 won per dollar and the tourist rate 2.2 won per

dollar. Since the tourist exchange rate is about 1/2 of that of the official exchange rate, the valuation of GNP in dollars is cut in half if the tourist rate is used. Presumably the official exchange rate has been used for the settlement of trade balances with the Soviet Union and other socialist countries and other official transactions. (If so, there must be major problems in negotiating the settlement of North Korean debts to the Soviet Union, given Soviet inflation and recent devaluations of the ruble against the dollar.)

While exchange rate-based dollar GNP estimates are useful for making comparisons among countries, such measures do not well reflect the actual purchasing power, standard of living, or level of productivity of economies being compared. A major problem is that the prices of services and other non-traded goods typically are extremely low in low-income countries and the prices of capital goods unusually high even in market economies; this results in an underestimate of the income in dollar terms of very low-income countries. The Kravis et al rule of thumb is that the dollar measure of GNP at exchange rates for very poor countries should be multiplied by three and for somewhat less poor countries multiplied by two. Thus the per capita income estimates of North Korea are somewhat understated in purchasing power parity terms; so too are the GNP per capita and standard of living estimates of South Korea based on its foreign exchange rate, though probably to a lesser degree than for North Korea (if the judgement that the lower the income, the greater the

understatement of true purchasing power parity, is correct). That GVSP and other value measures of North Korean output are in prices set by the planning authorities rather than by markets adds a further formidable complexity and additional degree of uncertainty and inaccuracy to dollar estimates of North Korea GNP.

Economic research on the North Korean economy is done, to one degree or another, in the United States, Japan, China, and the Soviet Union as well as South Korea. Each country has its own advantageous sources of information. For example, Japanese research benefits from the occasional visits of North Korean residents in Japan back to their home villages; they provide more some micro data on actual conditions, particularly in rural areas. Similarly, the Soviet Union has had up to 1,000 advisors in North Korea, and they have submitted reports on local conditions. However, I gather much of these data are collected by the intelligence agencies, and relatively little filters through for general consumption. Nonetheless, my guess is that the academic specialists in each of these countries have a reasonably good sense of what the data are.

The real problem is how to interpret the data in the light of its extreme paucity. The estimates of North Korea GNP per capita range widely, from as low as \$350 per capita (a Soviet estimate, evidently derived from comparison with the level of development of China, itself subject to serious underestimation) to as high as \$2400 (based on estimates adjusted at the official

exchange rate). Most estimates are between \$800 and \$1500, with many centering somewhere around \$1100-\$1200.

Nonetheless, one's estimate in the end is highly impressionistic and subjectively judgmental. Much depends on whether the viewer sees the North Korean economy as a glass half full or half empty. My present view is that in purchasing power terms (rather than based on exchange rate conversions) North Korean GNP per capita is somewhat greater than \$1200, but that its rate of growth (particularly in the earlier years) was less rapid than estimates based on exchange rate conversions.

In contrast, as already noted, there are immense amounts of data readily available on the South Korean economy. These include detailed estimates not only of GNP and its components, but of physical amounts of production for virtually all industries and sectors, data on prices, data on foreign trade, and the like. South Korean problems of data quality are probably no worse than those of other countries at a comparable level of development and indeed probably better. While there is some distortion of relative prices compared to the international relative prices of traded goods, they are readily identified (agriculture, some domestic heavy machinery, and the like). It is reasonable to take South Korean economic data at face value in virtually all dimensions and work from that. Like North Korea but to a much lesser extent, purchasing power rather than exchange rate comparisons would increase the level of GNP per capita, and probably modestly slow its growth rate estimates.

WITH WHAT DOES ONE COMPARE THE CURRENT NORTH KOREAN ECONOMY?

In addition to GNP comparisons based on the available statistical evidence, like every visitor I brought to North Korea and came away with certain impressions as well. It is important to make explicit what are the comparisons that enter one's judgments. My comparisons were on a variety of criteria: how the North Korean economy compares today with its past, particularly after the damage of the Korean War; how it compares with South Korea today; how it compares with China in 1974 when I first visited it, and with China today; and how it compares with what I expected.

Certainly the most important comparison is of North Korea with its own past. By those standards it has obviously done well. Pyongyang was in rubble at the end of the Korean War in 1953. By contrast, it is now an attractive, well-planned city with wide streets, large parks particularly along the river which divides the town, many new apartment buildings, and many strikingly attractive modern public buildings. And Pyongyang is the cleanest city I have ever seen; so too was Wonson and indeed everywhere we went. (Even the sides of the highway to Wonson were being swept.) There surely has been a great improvement in the capacity of the economy to produce all kinds of goods, and to raise the standard of living of the people significantly, even though consumption may be less than 1/2 of GNP. However, it is unclear whether since the early-mid 1980s there has been any significant improvement in living standards or indeed of GNP per

capita. The quality of goods is not as high as those elsewhere, though it seems adequate. We were told by North Korean policy makers that although their goods may not be as good as those available internationally, they are in sufficient supply and they are adequate, and that the people are reasonably content. I saw no evidence to dispute that judgement, but evidence of discontent is the last thing we could expect to obtain.

Clearly the material standard of living as well as the industrial structure and technological level and industrial output capability of South Korea is a quantum leap ahead of that of North Korea, as discussed above. Income distribution is certainly far from equal in South Korea, but it stands up pretty well in international comparison (probably more equal than in the United States). It appears that virtually everyone has benefitted from South Korea's sustained economic growth. I have no evidence on income distribution in North Korea. My guess is that, as is common in socialist societies, income is more equally distributed in North Korea, despite the perquisites going to the ruling elite.

When I travelled in China in 1974 I saw an economy that was in a similar state of policy flux and in a considerably higher degree of disorder. Indeed, North Korea is a very orderly society without the sorts of disruptions that we saw in China in 1974, in terms of the closing down of the universities and the like. Clothes in China in 1974 were drab, uniform, and serviceable, but less good than the clothes that we saw in

Pyongyang and elsewhere in North Korea in 1991. My impression is that North Korean levels of living today are substantially better than China's were in 1974.

In 1991 Beijing obviously is much more prosperous than Pyongyang. It is bustling, and has a wide variety of goods available for sale in private as well as state markets; there is a tremendous range of qualities and colors of clothing, on average much better than North Korea; and the building boom of the last decade in Beijing is remarkable. Beijing streets are crowded with automobiles and bicycles and pedestrians; there are rush hour traffic jams. In Pyongyang the streets have very few vehicles, virtually no bicycles, and far fewer people, mostly walking; according to our Study Mission distinguished and amiable leader Professor Scalapino, bicycles are banned in the city. Shopping is done primarily in neighborhood stores where residents have to be registered and can buy food, clothing, and other household items in rationed amounts at very low prices. Despite presumed energy shortages, street and building lights were on in Pyongyang, and there were even some neon lights, though nothing like the degree to which they have proliferated in Beijing in the past decade.

I asked Bingwei Tao, a Chinese economist who is head of the Asia-Pacific Studies Division of the China Institute of International Studies, how he compared the average GNP per capita or standard of living of China and North Korea. His answer was insightful. He pointed out that because there are huge regions

of China that are very poor relative to the most productive parts of the country, regional income dispersion is high and that poverty pulls down the average. In contrast in North Korea, since it is a much smaller country geographically and in total population, the regional variance in income is less pronounced. However, he said that China's capital stock is much better -- presumably in amount per capita and especially in its embodiment of higher levels of technology.

Frankly, I expected to see in North Korea an economy that was in worse shape than what I actually saw. I think I had been unduly influenced earlier in conversations with South Korean economists who tend to emphasize the half-empty glass approach, stressing North Korea's difficulties and problems. I was pleasantly surprised by my visual scenes and experiences, while recognizing they probably reflect North Korea at its best. Nonetheless, as made clear above, I judge North Korea to be a poor economy, now close to economic stagnation, with poor economic prospects unless there are substantial changes in economic policy. Moreover, I worry that conditions in rural North Korea, perhaps particularly in the far north, are not only substantially worse than what we observed (to be expected) but worse than I have considered. Anecdotal evidence from Koreans resident in Japan or Northeast China visiting relatives in North Korea suggests village conditions are bad; yet a World Bank study indicated that caloric intake was certainly adequate. How bad is bad? And are bad conditions temporary (due, say, to poor

harvests) or fundamental?

OTHER OBSERVATIONS

We do not know much about the industrial structure of the North Korean economy. In 1989 the North Korean government released extensive demographic data, including labor force by occupation and sex, in order to meet requirements for technical assistance from the United Nations Population Fund. These data have been analyzed in a comprehensive report by Eberstadt and Banister ⁵. They report 25.3% of the civilian labor force in 1987 of 12.5 million was agriculture, organized mainly into cooperatives and into a smaller number of state farms. Based on the demographic data and their reconstructions, Eberstadt and Banister also estimate the military forces to comprise at least 1.25 million persons, a substantially higher estimate than that of North Korea, and even of other outside estimates of a million plus. However, it is estimated some 200,000 or so of the soldiers are engaged in construction activities for the civilian economy; and it may be that some other soldiers engage in part-time farming activities. As already noted, the industrial structure is based on heavy industry. It is asserted that as much as 40% of industrial production and output is controlled by the military to produce goods for the defense apparatus.

Military expenditures eat up a substantial share of the GNP.

⁵ Nicholas Eberstadt and Judith Banister, "North Korea: Population Trends and Prospects", Center for International Research, U.S. Bureau of the Census (mimeographed, July 11, 1990).

As I recall the North Korean estimates are that military expenditures comprise about 12% of the state budget. It is commonly assumed that the state budget is about 60% of GNP ⁶. This implies that defense expenditures are about 7% of GNP, clearly an unrealistically low estimate. South Korean and United States estimates are that military expenditures comprise 20-25% of North Korean GNP ⁷. It has been estimated that something like \$375 million of exports in 1990 were of military equipment, including SCUDs. This is on the order of 20-25% of total exports. North Korea has developed a comparative advantage in export production of military equipment, a disquieting phenomenon.

We saw some results of investment activities and policies. Like other planned economies, North Korea seems to have a strong preference for very large-scale investment projects, probably at the substantial expense of small, incremental investment

⁶ Application of such ratios are one method of estimating GNP. The 60% rate was derived from the experience and GNP estimates of other communist planned economies; it has been applied by Pong S. Lee, among others. The South Korean Unification Board estimates of North Korea GNP assume the state budget is 75% of GNP and convert to dollars by using the available data on the commercial exchange rate, according to a private communication from Pong S. Lee.

⁷ South Korean defense spending has dropped below 4% of GNP in 1991 for the first time in 18 years (Far Eastern Economic Review, August 1, 1991, p. 12). While this suggests that in purely numerical terms absolute amounts of spending may be roughly comparable, the technological sophistication of South Korean equipment is undoubtedly far higher. Direct military forces comparisons are surely far more accurate than attempts to estimate spending in comparable units such as dollars.

activities in smaller-scale units of production. North Korean factories, as elsewhere in socialist economies, probably embody the vintage technology of the time they were built, with maintenance but without substantial improvements in technology. We saw four types of large-scale construction activities, each of which was impressive in its own distinctive way.

One is the "West Sea Barrage", a vast water control project at the mouth of the Taedong River below the port of Nampo on the west coast. Nampo's problem is that the tides are on the order of 7.5 meters (about 25 feet) daily. This severely affects water flows, boat traffic, and control over fresh water for irrigation. A 30,000-man unit from the Army was used to construct an eight kilometer long dam separating the ocean and the bay, with three locks at one end to allow ships of up to 50,000 tons to pass through. As a consequence of this successful project the flow of water has been stabilized and the fresh water behind the dam is at a relatively constant level. This is important for aquaculture and particularly for the flow of fresh water to land that can be reclaimed for irrigation. The total project includes the eventual reclamation of 300,000 hectares of land, of which 100,000 have already been reclaimed. The dam construction methods, according to the film we were shown, were labor-intensive and relatively simple. A total of 102 people died as a result of the construction activities. David Tappan indicated that this project was done effectively, using the abundant labor available to be mobilized through the military, and using

relatively simple equipment and construction techniques. He estimated that a major American construction company would have carried out the same project with a labor force of about 5,000 men and much more machinery. Given the abundance of labor in North Korea and the ability to mobilize it from military uses, this was an efficient mix of labor and capital. The project cost about the equivalent of \$4 billion. Whether this was an efficient use of capital is a matter to be analyzed, but it certainly was an effective use in the sense that this is a major project that has been completed. We were told that the project paid for itself through the control of a major flood that occurred several years after the project was completed. Certainly flood control as well as other benefits need to be estimated in doing a cost/benefit evaluation of the efficiency of the project.

Apparently the 300,000 hectares of reclaimed land constitute an important potential source of grain output as envisaged under the third Seven Year Plan. Assuming that 5 tons of rice per hectare are produced, this would result in an additional 1.5 million tons of grain. However, that falls substantially short of the targeted increase in total grain output from a reported 10 million tons (which may be high) to 15 million tons, and of rice to 7 million tons. I share Komaki's pessimism that the grain output target will not be achieved.

A second impressive form of investment activity is urban apartment construction. In driving into and within Pyongyang, one

is struck by the large number of apartment houses, eight stories or so high, that are pervasive throughout the city. William Maynes, an expert on the Soviet Union and Eastern Europe, noted that the architecture is on the Soviet model but more attractive in North Korea and the buildings appear far cleaner and better-maintained. At the same time we saw an extraordinary number of uncompleted apartment buildings, which were "under construction", and indeed work was being done on some of them. However, the number of uncompleted buildings was excessive. It involves a wasteful tying up of steel and raw materials, even if the opportunity cost of the military construction workers is zero; the cement and steel otherwise could have been exported and earned vitally needed foreign exchange. Moreover, the North Korean complaint of labor shortages clearly reflects such misallocation of workers as well as labor-intensive methods of production and the very large army. It is not clear why there has been such a long gestation period on the completion of these buildings. I offer two hypotheses: the supply of skilled craftsmen to finish off the interiors of the buildings is limited; and the availability of building supplies to complete the buildings is limited. Perhaps the exteriors of the buildings were put up because their construction is relatively easy by military construction units.

One of the striking visual scenes of Pyongyang is the 105-story hotel under construction in the center of the city, a third type of major investment project. It is shaped rather like a

sharply vertical pyramid. Clearly this is a showcase project. It is designed to have 3,000 rooms, some 6,000 beds, especially for tourists as a foreign exchange earner. Many of the lower windows have been blocked in with what appear to be cement blocks. The explanation is that in the winter the wind blows through and it is excessively cold for interior construction work.

The project has two problems. First, can such a hotel be filled to capacity on an ordinary operating basis once completed? At present there is not adequate infrastructure -- airplanes, local transport, and other tourist facilities -- to handle enough people to fill 3,000 hotel rooms nightly. This would place a tremendous strain on existing infrastructure, even though it would be a very beneficial foreign exchange earner. Moreover, I do not see where sufficient demand would come from on a sustained basis, unless North Korea made it easy and attractive for South Korean visitors (an unlikely prospect in the near term). Interestingly, in our meeting with Vice Minister of External Economic Relations Kim, he stressed this as one of two projects for which they would like to have foreign involvement, notably in the management of the hotel's operations. He indicated the government was prepared to provide special concessions, such as not binding it by existing laws and allowing a casino in the hotel. He said that a Hong Kong entrepreneur had invested in the project, and that some Chinese Americans visiting Pyongyang on a tour has expressed interest. However, unless far greater tourist demand is generated than seems likely, this project is likely to

be an expensive white elephant.

Apparently, a second and far more serious problem with this 105-story hotel project has to do with the technical aspects of its construction. All we have are rumors, no hard facts. We heard that an East German engineering company had investigated the project and found the building to be structurally unsound. We heard the building had tilted somewhat, perhaps because its foundation had settled unevenly. We heard that, consequently, no elevators can be installed. We heard that the windows pop out, one reason why there are no windows installed. We saw no evidence of construction activity, but were told it is proceeding inside the building. Scalapino said the building appeared no different from his visit to Pyongyang two years ago. If indeed this building cannot be completed it will be far more than a white elephant; it will be a national embarrassment.

The fourth type of major investment activity was in sports stadia and monuments. A certain amount is undoubtedly necessary, to provide public amenities. An additional amount may be justified for nation-building in a young state -- to install a sense of national pride, a la Sukarno in Indonesia's early independence period. However, Pyongyang has an edifice complex. In addition to the 105-story hotel, it has an Arch of Triumph larger than the one in Paris and the obelisk monument to the chuch'e concept, in honor of President Kim Il Sung's seventieth birthday, taller than the Washington Monument. North Korea is estimated to have spent some \$5 billion (equivalent to perhaps

one-fifth of one year's GNP) building some 280 new facilities including an attractive 150,000 seat stadium, by far the largest in Asia, in connection with its sponsorship of the 13th World Youth Festival in 1989 (North Korea News, January 15, 1990, cited in Rhee, op. cit.) The obelisks and billboards with exhortatory slogans from the sayings of Kim Il Sung or his son and heir apparent Kim Jong Il scattered throughout the cities, and giant slogans cut into the mountainsides, and even the huge statue of Kim Il Sung in Pyongyang were somewhat less ubiquitous and oppressive than I had anticipated (once again the problem of preconceptions). Such sloganeering and creation of a cult of leadership may contribute to nation-building; I leave that to political scientists and others to judge. Even so, for a poor country to devote so many resources to political purposes has to be very costly in straight economic development terms.

Foreign Economic Policy

Several members of our Study Mission had a good, useful, informative meeting with the Vice Minister of External Economic Affairs Kim Jon U and several members of his staff. He first described the administrative arrangements for foreign trade and external economic relations. There are two ministries. The Ministry of Foreign Trade handles the export and import of specific goods and trade policy. The Ministry of External Economic Affairs engages in broadly defined economic cooperation, including the export and import of complete plants, the handling of foreign construction projects, broad technical assistance

cooperation with nonaligned and Third World countries, and the financing of plant imports through foreign loans, as well as joint ventures with participants from foreign countries. His ministry has four vice ministers, one each in charge of capitalist countries and socialist countries (Mr. Kim); African and other Third World countries; foreign construction activities; and the internal administrative affairs of the ministry. The External Economic Promotion Committee handles relationships with countries with which North Korea does not have formal political relationships; Vice Minister Kim is its Chairman.

The Soviet Union has been by far North Korea's most important foreign economic partner for some forty years. While trade has decreased somewhat in recent years and even more since late 1990, it still comprised about 40-50 percent of imports and exports for 1989 and 1990. The main imports from the Soviet Union have been coke, aluminum, machine tools, trucks, and autos; and exports of magnesia clinker, cement, zinc, lead, steel plate, and machine tools. We were told that virtually all trucks and buses were produced in North Korea, the only exception being the engines for some very large trucks. The cars we saw on the road were predominantly Mercedes Benz (to our surprise) though there was a sprinkling of Toyotas and Nissans. They are almost all assigned to various government ministry and agency car pools. We were told the only private cars are owned by rich North Koreans from Japan.

However, the economic relationship with the Soviet Union

changed dramatically when the new agreement was signed November 1, 1990, going into effect on January 1, 1991. The agreement ended the previous clearing arrangement for the handling of bilateral trade balances under which, I understand from other sources, North Korea was able to cumulate debit balances (de facto loans) from the Soviet Union on the order of 2-3 billion rubles (though, as already noted, the exchange rate used for conversion and ultimate settlement is bound to be controversial). Moreover, under the new agreement all balances have to be settled in convertible currencies -- the US dollar, though the Swiss franc may be used when both sides agree -- and all transactions booked in convertible currencies. Of at least equal significance, all imports and exports are at world prices. In the past the Soviet Union sold its oil to North Korea at a subsidized price below world prices; I learn from other sources it was about 2/3 of the world price. We did not obtain information on the prices at which North Korean goods were sold to the Soviet Union; it is not clear the terms of trade benefitted North Korea as much as the oil price would suggest.

As a result of the agreement, trade with the Soviet Union had declined substantially in recent months. We subsequently were told that imports had stopped altogether from November 1990 until a new one-year trade agreement, rather than the previously standard five-year agreement, was signed between North Korea and the USSR in April 1991. According to the subsequent study mission discussions in Moscow, those negotiations were

complicated by the Soviet insistence that North Korea pay off some of its accumulated debt; they reportedly did agree to repay several hundred million dollars. The November 1990 agreement made no new Soviet loans and contained no other special provisions, Mr. Kim stated.

In the short run trade with the Soviet Union will be difficult because of the economic decline in the Soviet Union and its problems of political instability. In the longer run, however, Mr. Kim anticipates that the USSR as well as China will continue to be good trading partners with whom trade will expand. This is natural, given geography, the respective economic structures of the economies, and particularly (to my mind) the historic set of specific trading relationships between specific enterprises, as well as North Korea's continuing need to obtain replacement parts for repairs of machinery and equipment earlier imported from the Soviet Union.

Vice Minister Kim stressed that the international dimension of the North Korean economy is completely market based (though by state trading agencies, of course); transactions are done essentially at international prices relying on international markets. The previous priority given to the USSR and socialist and nonaligned economies will weaken, and trade patterns are likely to diversify under this new regime of international prices and hard currency settlement.

Trade with China is expected to expand over time. North Korea now exports concentrated iron ore, cement, and machine

tools; and imports oil, coke, industrial textile goods, raw rubber, and machine tools. However, the earlier principle of trading raw materials for raw materials and machine tools for machine tools will not prevail in the future. Japanese and South Korean experts agree that China sells its oil to North Korea at one-half the world market price. While trade with China will increase, Chinese sources indicated that they did not expect to be able to provide substantial foreign economic aid to North Korea, certainly not sufficient to replace the aid provided by the Soviet Union. China is not a source of loans and does not appear to be a source of trade or technology to solve North Korea's current economic problems.

Exports to Japan doubled between 1984 and 1990, from \$145 million to \$300 million, according to standard Japanese sources (JETRO), but the total trade is partial and small. North Korea imports have been small (\$255 million in 1984) and declining (\$176 million in 1990). From a Japanese perspective, it is trade between Koreans in North Korea and Koreans in Japan. Since 1987 North Korea has actually had an export surplus with Japan. The main reason is that all exports from Japan must be on a cash basis since North Korea defaulted in the early 1980s, even after a renegotiation of the debt, on a large loan from Mitsui Trading Company (\$500 million or so) for a cement plant. However, apparently North Korea obtains trade credit from at least one Austrian bank, though probably in limited amounts. The prospects for trade and general economic relations with Japan depend

fundamentally upon the normalization of relations and the terms of any related financial settlement.

North Korea has no trade with the United States. Perhaps it is better put the other way: because of its trade and investment embargo against North Korea, the United States has no trade or commercial relations with North Korea. North Korea would like to see the embargo ended and to develop trade and joint venture investment relationships, particularly (or at first) with Korean Americans. North Korea wants to import heavy machinery, electronics, and other relatively technologically sophisticated goods from the United States. It realizes that it could not export machinery to the United States, but it certainly could export processed minerals for which, after all, there are international markets.

The North Korean government is also interested in establishing joint ventures with foreign firms. The main purposes are to bring in foreign technology and to produce exports. Vice Minister Kim said there are some thirty joint ventures in operation, mainly with Koreans in Japan; since they are recently established they have not yet begun to generate substantial amounts of exports. He hopes for another 200 or so joint ventures in the next year or two.

Vice Minister Kim specifically suggested two large projects as worthy of American investment attention. One is the 105-story hotel which needs foreign management and operations, since it will be aimed at the foreign tourist market, as has been

discussed above. The other is a proposed special economic zone in the far northeastern corner of North Korea, in the Tumangang triangle, which borders on China and the USSR, as well as the East Sea (or, as the Japanese term it, the Japan Sea). This area has a locational advantage whereby it could reduce transport costs to the Soviet Union and northern China from Japan or the United States. For northeast China in particular, it would provide a closer deepwater access than Dalien, far to the south by rail. Kim pointed out that from San Francisco to Dalien it takes 26 days by boat, but would only take 20 days to this special economic zone. He estimated this project would result in a saving of freight costs of 10%. Moreover, it would provide the basis for development of a more widespread special economic zone, including manufacturing and other activities. The United Nations Development Program (UNDP) is presently making a preliminary study of this project. Some interest in Japan apparently has been expressed in this project and a preliminary investigation is underway. Tony Namkung suggests there are substantial economic problems. Apparently the river has to be dredged for some 18 miles in order to have oceangoing vessels of any size reach the designated port. There apparently is a spur rail line of sorts, but substantial further rail and other infrastructure adjustments will surely be required.

North Korea has an overseas construction company which has been operating abroad on projects for some ten years in Libya, the Arab Emirates, Yemen, and to a small extent, in the USSR.

Presumably these are selling relatively unskilled construction labor services and do not embody high engineering technologies.

North Korea Hard Currency Foreign Debt Problems

North Korea has an estimated foreign debt of about \$6.8 billion, I gather, though estimation of the dollar value of Soviet, East European and Chinese credits is difficult. Much is with Japan. All debt from market economy sources has been defaulted on. This means that virtually all North Korean imports must be purchased in cash. Trade credit must be modest. Vice Minister Kim stated that it is presently not possible to service the debt because domestic production is needed for domestic uses. Only as trade is expanded will it be possible to service the debt. More importantly, North Korea intends to use the expected reparations or other payments generated from normalization with Japan to service its debt, at least sufficiently to reestablish creditworthiness, according to Japanese sources. Certainly Vice Minister Kim's expectation is that once relations are normalized with Japan, and with the United States, considerable foreign capital will flow into North Korea in various forms. This includes trade credit, World Bank and other international agency loans, and private foreign direct investment. There seems to be some expectation that once normalizations have taken place, embargoes ended, and the doors opened on both sides, then foreign funds and investors will fairly readily flow into North Korea.

This certainly is an optimistic assessment, and unrealistic in the short run. However, it may well be indicative of the long-

run changes in external economic policy the North Korean government is forced to consider seriously.

CONCLUSIONS AND POLICY IMPLICATIONS

I derive two general policy conclusions, which I believe are shared by other members of our Study Mission.

First, the North Korean economy is unlikely to collapse within the foreseeable future, despite long-run and structural as well as short-run problems. The levels of production and income are sufficiently high and the society so extraordinarily well mobilized (organized and indoctrinated), that it is unlikely there will be loss of control over the economy or any sort of economic chaos. This is reinforced by the seeming reality (and standard view) that ordinary persons apparently know virtually nothing about conditions in South Korea or abroad, economic or political, other than what they are told by the government. Yet some information must filter in. Koreans resident in Japan, China, or elsewhere on occasion visit relatives and ancestral villages in North Korea. Small but regular tourist groups visit (we met one from Taiwan), though on a carefully selected route of resort hotels. Thousands of young North Koreans have studied in the USSR, Eastern Europe, and China. Rumor undoubtedly substitutes for hard fact. We simply do not know how much North Koreans know, much less what they really think. Nonetheless, it is a highly controlled, seemingly placid society. I certainly was impressed by the absence of armed soldiers or police in the

places we visited.

Thus, I do not visualize collapse of the North Korean economy as likely to become a major cause of instability on the Korean peninsula in the foreseeable future. However, if there were other sources of internal tension -- such as conflict emerging in a generational transition period -- then economic difficulties might be used by one group or another as justification for political as well as economic change. In sum, current or future economic difficulties could feed into a political process so as to exacerbate tensions, but are not likely to be a basic cause of such tensions.

Second, North Korea is eager to expand its trade, joint venture and other economic relations with the United States as well as Japan and indeed with all countries other than South Korea. Policy makers are eager to see the US trade and direct investment embargoes removed or at least substantially reduced. They recognize North Korea will have to sell and buy at world prices. North Korea can export a variety of processed minerals to the world, since they are standard homogeneous goods, and probably simple, inexpensive machine tools to low income countries. North Korea's fundamental problem, as in any planned economy, is how to reallocate output from domestic uses to exports. This is a bureaucratic central planning issue even more than an economic issue, I suspect.

In the longer run, North Korea will have to go beyond the export of minerals and whatever manufactured goods it can now

produce relatively competitively. It is difficult to know product by product where North Korean comparative advantage lies. Presumably it is in labor-intensive production of textiles and other light industrial goods. Such a pattern of development probably will have to be accomplished in a manner similar to South China, whereby marketing, technology, and other managerial skills are somehow imported. North Korea's other area of comparative advantage is in military hardware, as already noted. This poses difficult political problems for the United States and all nations concerned with conventional weapons proliferation.

North Korean policy makers seem to expect to obtain considerable foreign resources -- goods, technology, management, market know-how -- through foreign aid, loans, and direct investment. Where will this come from? The historic source, the Soviet Union, is no longer willing or capable. China, with its own developmental needs and problems, will not make substantial additional resources available. Nor will the United States. South Korea is a real possibility in theory, but in practice is rejected by North Korea as the paramount source of subversion. Access by North Korea to the international lenders -- the World Bank, the IMF, the Asian Development Bank -- will require wrenching changes in North Korean economic policy, much less the ending of economic secrecy and sharing of hard quantitative data with them; even so, access would take time.

Japan remains the major viable candidate as a source of resources for North Korea. The dramatic about-face in North

Korean diplomacy -- to seek to normalize relations with its former colonizer which it has long vilified and still deeply mistrusts -- has to be in large part because of the North Korean perception that it has a rightful claim of reparations in payment for Japan's damages as a colonizer. My guess is that normalization will take place but it will take considerable time and will result in substantially smaller Japanese payments than North Korea expects. It appears that trade rather more than aid or investment must be the route to a successful North Korean economic opening strategy.

North Korea faces a deep economic policy dilemma, initially of degree but probably ultimately of kind. That is: how far and in what ways should the economy open itself up to international economic transactions? It is clear that the historical autarkic strategy can not persist in its current form. Will only modest opening, combined with Japanese foreign economic assistance and perhaps some international institution loans, be sufficient to maintain an economy that in most respects continues to remain closed? Or will it require a far greater opening to sustain future economic development and growth? A modest opening of economic relations can be consistent with a philosophy of economic self-reliance ⁸. After all, self-reliance does not

⁸ This and other points are nicely made in the paper by Kim Su Yong, Chair of the Economics Faculty at Kim Il Sung University, in his paper "Expanding and Developing the Regional Economic Cooperation is the Common Task of the East Asian Countries" presented to the May 1991 symposium "Northeast Asia's Emerging Order in a Changing World" sponsored in Tokyo by the Yomiuri Shimbun and the Institute for Sino-Soviet Studies, George

necessarily mean autarky; it means independence from foreign exploitation.

The great danger of enhanced opening for the government is essentially political. While the elite are well informed, ordinary North Koreans know very little about foreign economic opportunities, social conditions, and the like. The process of economic interactions with foreigners can only increase their information about the rest of the world. How will this new information be received and absorbed, and filtered and counterbalanced through the government? Will opening to the world result over the long run in the subversion of the domestic political and economic system? That must be of deep concern to the North Korean leadership. The political danger is heightened by the fact that the counter-model to the North Korean "socialist paradise on earth" is on its southern border and consists of fellow Koreans: South Korea. No doubt a great fear in both Koreas -- North and South -- is that as a consequence of some internal shock somehow the DMZ border will be breached by a huge flow of North Korean civilians to South Korea in search of food, higher incomes, and greater personal and political freedoms. For North Korea that would spell the end of the regime. For South Korea that would impose an intolerably heavy economic burden.

South Korea and the United States also face policy choices: to attempt to force the collapse of the Korean economy by

continued embargoes and other measures; or to try to "educate" the North Korean economy to the ways of the world through economic, cultural, and other forms of exchange. To date, the United States and South Korea have pursued the former policy. In my judgement, it is not a policy that is likely to bring about North Korean collapse even over the longer run. Moreover, if it were pursued vigorously -- say, by encouraging an arms and military expenditures race (such as South Korea Team Spirit exercises and North Korean reactive mobilization) between South Korea and North Korea in order to drain further the resources of North Korea -- it could well lead to military adventurism or at least a heightening of the already paranoid sense of military threat on both sides of the demilitarized zone (DMZ).

The better option is to remove existing barriers to economic relations with North Korea, and to expand those relations on a step-by-step basis. The long-run objective would be to broaden the knowledge, horizons, and perceptions of North Koreans, the policy making elite and the common people alike. In a sense this implies subversion of the Communist state through peaceful means. The model of course is East Germany, and its absorption by West Germany. That model surely must provide tremendous concern for the North Korean government; it accentuates the dilemma they face.

I found it interesting that everyone I spoke to in Japan and in South Korea believes that in the long run South Korea will indeed absorb North Korea economically and politically. The one

state-one economic system format will be based on the South Korean model, not the North Korean model; and it is difficult to conceive of an intermediate, compromise model given the inherent contradictions between the two systems. This position has considerable economic logic, given the much larger size and prospects for continuing substantially better economic growth in South Korea.

I found it also interesting that most South Korean policy makers do not express an eagerness to achieve complete reunification and full economic integration quickly. They regard the costs as simply too staggering, especially as they evaluate the German experience. Certainly a major consideration is that full reunification will presumably allow full mobility of South Koreans to North Korea and North Koreans to South Korea. Given the tremendous wage and income disparities between North and South, the expectation is that South Korea would be overwhelmed by the influx of potential North Korean workers -- far beyond the current capacity of the South Korean economy to absorb despite the emerging labor shortages in South Korea. Encouraging the opening of North Korea is a better and certainly a safer policy in the shorter run, and probably better in the longer run. I have no clear sense of the process by which full reunification will eventually occur. The German model may turn out to be less relevant than many think. The Chinese experience of gradually opening its economy to international transactions and gradual and piecemeal movement toward market forces may be a more appropriate

model, at least for predictive purposes, for North Korea in the foreseeable future.

If South Korea believes that eventually it will absorb North Korea economically, then it has a vested interest in trying to reduce those future costs. One way is to narrow the economical differentials between North and South, namely by encouraging very rapid economic growth in North Korea. However, that would have to be done under condition of reductions in military expenditures by both North and South and in reduced military tensions, so that there would be real assurance that the increased economic resources being generated through economic growth were going to the civilian sectors rather than the military. If South Korea really believes its absorption model, then it should be pleased to see North Korea growing even more rapidly than South Korea in order that the differential narrows. However, to take that position -- and perhaps the commitment of South Korean resources to North Korean development -- requires high levels of mutual trust and confidence, in sharp contrast to current high levels of mistrust and fear in both South and North.

United States policy toward North Korea has not changed substantially for some forty years. Yet the new conditions on the Korean peninsula and in the regional environment much less the global environment, as well as the situations in the four major powers in the region, now make the United States policy outmoded, static, and sterile. The time has come to engage in a step-by-step process of removing barriers to economic

transactions between the United States and North Korea, and of opening up economic relations based on normal market forces. Similarly, the United States should encourage trade and other economic relations between South Korea and North Korea, for all the same reasons.

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